Posing Purposeful Questions
Question Types

Question Type	Description	Examples
Gathering information	Students recall facts, definitions, or procedures.	• When you write an equation, what do the variables tell you? • What is the formula for finding the _____?
Probing thinking	Students explain, elaborate, or clarify their thinking, including articulating the steps in solution methods or the completion of a task.	• As you represented the problem, how did you choose to organize your information? • Can you show and explain more about how you used _____ to find the answer to the task?
Making the mathematics visible	Students discuss mathematical structures and make connections among mathematical ideas and relationships.	• What does your equation have to do with the problem? • How does that representation relate to _____?
Encouraging reflection and justification	Students reveal deeper understanding of their reasoning and actions, including making an argument for the validity of their work.	• How might you prove that ____ is the solution? • How do you know that _____will always be true?

From pages 36–37 in National Council of Teachers of Mathematics. (2014). *Principles to actions: Ensuring mathematical success for all.* Reston, VA: Author.